Gp 2697
TA
SQ
1/28/03

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Lucas Merrow et al.	Examiner: Elahee, MD S.
Serial No.	09/945,282	Group Art Unit: 2697
Filed:	August 31, 2001	
Title:	SPEECH RECOGNITION METHOD AND SYSTEM FOR DETERMINING THE STATUS OF AN ANSWERED TELEPHONE DURING THE COURSE OF AN OUTBOUND TELEPHONE CALL	

CERTIFICATE OF MAILING (37 C.F.R. § 1.8(a))

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail under 37 CFR 1.8(a) in an envelope addressed to the Assistant Commissioner for Patents, Washington, DC 20231 on the date indicated below.

Date: 1/13/03

Gayle Endres

Assistant Commissioner for Patents
Washington, DC 20231

Sir:

TRANSMITTAL LETTER

Enclosed herewith for filing in connection with the above-identified patent application are the following:

1) Amendment; and
2) Acknowledgment Postcard.

Respectfully submitted,

Date: 1/13/03

Scott A. Ouellette
Registration Number 38,573
McDermott, Will & Emery
28 State Street
Boston, MA 02109
Telephone (617) 535-4422
Facsimile (617)535-3800

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Lucas Merrow et al.	Examiner: Elahee, MD S.
Serial No.	09/945,282	Group Art Unit: 2697
Filed:	August 31, 2001	
Title:	SPEECH RECOGNITION METHOD AND SYSTEM FOR DETERMINING THE STATUS OF AN ANSWERED TELEPHONE DURING THE COURSE OF AN OUTBOUND TELEPHONE CALL	

CERTIFICATE OF MAILING (37 C.F.R. § 1.8(a))

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail under 37 CFR 1.8(a) in an envelope addressed to the Assistant Commissioner for Patents, Washington, DC 20231 on the date indicated below.

Date: 1/13/03

Gayle Endres

Assistant Commissioner for Patents
Washington, DC 20231

Sir:

AMENDMENT

In the Specification

Please amend the specification as follows:

On page 11, line 5, change "10" to --12--; and

on page 13, line 5, change "32" to --28--.

RESPONSE

In response to the Office Action mailed October 11, 2002, applicants respectfully request reconsideration. In the Office Action, the drawings were objected to and claims 1-24 were rejected. By this amendment, the specification has been amended to address the drawing objections. Claims 1-24 remain pending in this application.

Objection to the Drawings

Fig. 1 was objected to as not including a reference numeral mentioned in the description and the drawings were objected to as not including the reference numeral 28, as mentioned in the description. The specification has been amended to remedy both objections. No new matter has been added.

Rejection of Claims 1-24 Under 35 U.S.C. §103

Claims 1-5 and 11-15 were rejected under 35 U.S.C. §103(a) as being unpatentable over Brown et al. (U.S. Patent No. 5,333,180) in view of Szlam et al. (U.S. Patent No. 5,594,791). The examiner states that Brown teaches a call message delivery system providing a voice message service in response to a voice call message delivery request from a caller. The examiner concedes that Brown does not teach "performing a speech recognition analysis on said spoken response", but that Szlam teaches that voice recognition is an option to the preferred DTMF tones for determining a customer's response. This rejection is respectfully traversed because there is no teaching or suggestion in Brown to combine Szlam with Brown to include speech recognition and, even if there was a motivation to combine Brown and Szlam, the combination does not teach the invention recited in claims 1-5 and 11-15.

Independent claim 1 recites a method of determining the status of an answered telephone during the course of an outbound telephone call comprising:

A. placing, with an automated calling system, a telephone call to a location having a telephone number at which a target person is listed;

B. upon said telephone call being answered, initiating a prerecorded greeting which asks for the target person;

C. receiving a spoken response from an answering person;

D. performing a speech recognition analysis on said spoken response to determine a status of said spoken response; and

E. if said speech recognition analysis determines that said answering person is said target person, initiating a speech recognition application with said target person.

Brown teaches a call message delivery system (CDS) which is designed to accommodate callers who either have an immediate need to reach an intended recipient or callers who wish to contact a recipient at a later time, but who cannot call at that time. See column 8, lines 16-23. In the system disclosed by Brown, a caller dials a telephone number to be connected to the CDS. Once connected, the caller can record a message which is to be delivered to a recipient by the CDS. The message may be sent according to a standard delivery schedule or the caller can customize the delivery. Col. 8, lines 34-41. If the caller is not able to set up the message schedule using the automated system, a human attendant may assist in the set up and scheduling of the message. The caller may choose to request that the recipient record a response to the caller's message. If a recipient's reply is requested, the recipient hears an announcement and a tone prompting for the recording of a response. The system then determines if a response has been recorded within a certain time interval. If the system detects recipient speech during the time interval, it determines that a response has been recorded. Col. 14, line 59 - col. 15, line 5. The caller also has the option of being notified once the message is delivered.

However, Brown does not teach or suggest the capability of determining, in an automated fashion, if the person who answers the call is the intended recipient. The speech detection step described above only determines if a reply has been recorded, it does not determine the content of the reply. The only disclosure in Brown of determining whether the answering party is the intended recipient is when a human attendant is involved in the process. This is described in column 15, lines 41-51. Accordingly, without the intervention of a human attendant, the CDS system of Brown cannot determine whether the answering party is the intended recipient. Brown does not even contemplate or suggest any way to determine the identity of the answering party other than through the use of a human attendant. There is absolutely no teaching or suggestion that this function could be carried out in a completely automated fashion, through the use of a speech recognition system.

The examiner states that the motivation for such a combination is to allow the CDS to perform a speech recognition analysis in order to make a selection without requiring the person who answers the call to press his DTMF keypad. However, Brown does not require the person answering the phone to make any "selections" whatsoever. The only action that may need to be taken by the answerer is leaving a recorded reply. Whether this option is available to the

answerer is determined by the caller, and not by a selection made by the answerer. Accordingly, there is no need in the Brown system for a speech recognition analysis, as suggested by the examiner, since the Brown system does not allow the answerer to make any selections or provide any input that is analyzed by the CDS system.

Based on the foregoing, the applicants assert that because there is no teaching or suggestion in Brown to modify the CDS system to include speech recognition, that the examiner's conclusion that it would be obvious to modify Brown to include a speech recognition system is improperly based on hindsight reasoning. Accordingly, the suggested modification is improper, and the rejection under 35 U.S.C. §103(a) should be withdrawn.

Furthermore, the examiner states that Szlam teaches voice recognition as an option to using DTMF tones to evaluate the response of a customer. However, as set forth in column 20, lines 12-19, the only possible, and not preferable, use of voice recognition in Szlam is to interpret responses to queries where a response can be only one of a limited number of anticipated responses to the queries. This is probably why the use of DTMF tones is preferred over the use of voice recognition. The Szlam system does not, and cannot, determine whether the answering party is the intended customer through the use of speech recognition. Therefore, modifying Brown to include whatever speech recognition capabilities that may be taught by Szlam would not result in the invention recited in independent claim 1. The combination of references does not teach the combination of steps recited in claim 1, including the step of performing a speech recognition analysis on the spoken response to determine a status of the spoken response and, if the speech recognition analysis determines that the answering person is the target person, initiating a speech recognition application with the target person. Accordingly, even if the combination suggested by the examiner were proper, it would not teach the invention recited in independent claim 1. Independent claim 1 is therefore allowable over the combination suggested by the examiner and the rejection under 35 U.S.C. §103(a) should be withdrawn.

Claims 2-5 depend from independent claim 1 and are allowable for at least the same reasons as independent claim 1.

Independent claim 11 recites a system for determining the status of an answered telephone during the course of an outbound telephone call comprising:

an automated telephone calling device for placing a telephone call to a location having a telephone number at which a target person is listed; and

a speech recognition device which, upon said telephone call being answered, initiates a prerecorded greeting which asks for the target person, receives a spoken response from an answering person and performs a speech recognition analysis on said spoken response to determine a status of said spoken response;

wherein, if said speech recognition device determines that said answering person is said target person, said speech recognition device initiates a speech recognition application with said target person.

As set forth above, applicants assert that the combination of references suggested by the examiner is improperly based on hindsight reasoning because there is no teaching or suggestion in Brown for the combination. Furthermore, the combination does not teach the invention recited in independent claim 11. In particular, the combination does not teach the combination of elements recited in the claim, including a speech recognition device which, upon the telephone call being answered, initiates a prerecorded greeting which asks for the target person, receives a spoken response from an answering person and performs a speech recognition analysis on the spoken response to determine a status of the spoken response;

wherein, if the speech recognition device determines that the answering person is the target person, the speech recognition device initiates a speech recognition application with the target person.

Accordingly, independent claim 11 is allowable over the combination and the rejection of independent claim 11 under 35 U.S.C. §103(a) should be withdrawn.

Claims 12-15 depend from independent claim 11 and are allowable for at least the same reasons as independent claim 11.

Claims 6-8, 10, 16-18 and 20 were rejected under 35 U.S.C. §103(a) as being unpatentable over Brown in view of Szlam '791 and further in view of Miner et al. (U.S. Patent No. 5,652,789). This rejection is respectfully traversed.

Claims 6-8 and 10 depend from independent claim 1 and, based on the foregoing arguments, are allowable for at least the same reasons as independent claim 1.

Claims 16-18 and 20 depend from independent claim 11 and, based on the foregoing arguments, are allowable for at least the same reasons as independent claim 11.

Claims 9 and 19 were rejected under 35 U.S.C. §103(a) as being unpatentable over Brown in view of Szlam '791 and further in view of Szlam et al. (U.S. Patent No. 5,828,731). This rejection is respectfully traversed.

Claim 9 depends from independent claim 1 and, based on the foregoing arguments, is allowable for at least the same reasons as independent claim 1.

Claim 19 depends from independent claim 11 and, based on the foregoing arguments, is allowable for at least the same reasons as independent claim 11.

Claim 21 was rejected under 35 U.S.C. §103(a) as being unpatentable over Brown in view of Szlam '791 and further in view of Miner et al. (U.S. Patent No. 5,652,789). This rejection is respectfully traversed.

Independent claim 21 recites a method for determining the status of an answered telephone during the course of an outbound telephone call comprising:

A. placing, with an automated calling system, a telephone call to a location having a telephone number at which a target person is listed;

B. upon said telephone call being answered, initiating a prerecorded greeting which asks for the target person;

C. receiving a spoken response from an answering person;

D. performing a speech recognition analysis on said spoken response to determine a status of said spoken response; and

E. providing at least one of the following responses based on said speech recognition analysis:

a. if said speech recognition analysis determines that said answering person is said target person, initiating a speech recognition application with said target person;

b. if said speech recognition analysis determines that said spoken response indicates that said answering person is not said target person, initiating a prerecorded query asking for said target person, wherein, upon said target person answering said telephone call, said method further comprises initiating a speech recognition application with said target person;

c. if said speech recognition analysis determines that said spoken response indicates that said target person is not present at said location, initiating a prerecorded query asking to leave a message for said target person;

d. if said speech recognition analysis determines that said spoken response is a hold request, entering a wait state to wait for said target person to provide a spoken response to said telephone call, wherein, upon said target person providing a spoken response to said telephone call, said method further comprises initiating a speech recognition application with said target person;

e. if said speech recognition analysis determines that said spoken response is a request for the identity of the entity responsible for the calling system, initiating a prerecorded response indicating the identity of the calling party, repeating said prerecorded greeting which asks for the target person, and repeating step C through step E;

f. if said speech recognition analysis determines that said spoken response indicates that said telephone number is not the correct number for the target person, initiating a prerecorded apology message and terminating said telephone call; and

g. if said speech recognition analysis cannot determine a status of said spoken response, repeating said prerecorded greeting which asks for the target person, and repeating step C through step E.

As set forth above, applicants assert that the combination of references suggested by the examiner is improperly based on hindsight reasoning because there is no teaching or suggestion

in Brown for the combination. Furthermore, the combination does not teach the invention recited in independent claim 21. In particular, the combination does not teach the combination of elements recited in the claim, including the step of performing a speech recognition analysis on the spoken response to determine a status of the spoken response and providing at least one of the recited responses based on the speech recognition analysis. The "voice recognition equipment" referred to by the examiner from col. 16, lines 49-53 of Brown is only suggested by Brown for replacing the human attendant for the purpose of carrying out "status notification calls" to the caller in Brown's CDS. It has nothing to do with analyzing any spoken input received from the answerer of the call.

Accordingly, even if the combination suggested by the examiner were proper, it would not teach the invention recited in independent claim 21. Independent claim 21 is therefore allowable over the combination suggested by the examiner and the rejection under 35 U.S.C. §103(a) should be withdrawn.

Claim 22 was rejected under 35 U.S.C. §103(a) as being unpatentable over Szlam '731 in view of Brown. The examiner states that Szlam teaches an apparatus for processing outbound calls which includes initiating an outbound call, determining whether the outbound call has been answered by a machine and playing a termination message if the call is answered by a machine. This rejection is respectfully traversed.

While Szlam '731 may teach a system which determines whether a call has been answered by a machine, it does not teach the method of detecting an answering machine recited in independent claim 22. Independent claim 22 recites a method of detecting an answering machine comprising:

A. placing, with an automated calling system, a telephone call to a location having a telephone number at which a target person is listed;

B. upon said telephone call being answered, waiting for a predetermined time period for a spoken response;

C. upon receiving said spoken response, playing a prerecorded greeting prompt which asks for said target person;

D. while playing said prerecorded greeting prompt, attempting to detect a further spoken response in excess of a predetermined time parameter;

E. in the absence of detecting said further spoken response during the playing of said prerecorded greeting prompt, initiating a query application;

F. upon detecting said further spoken response during the playing of said prerecorded greeting prompt, terminating the playing of said prerecorded prompt; and

G. indicating that an answering machine has been detected.

Szlam '731 does not teach the combination of steps recited in independent claim 22, including the steps of, upon receiving a spoken response, playing a prerecorded greeting prompt which asks for the target person; while playing the prerecorded greeting prompt, attempting to detect a further spoken response in excess of a predetermined time parameter; in the absence of detecting the further spoken response during the playing of the prerecorded greeting prompt, initiating a query application; and, upon detecting the further spoken response during the playing of the prerecorded greeting prompt, terminating the playing of the prerecorded prompt.

While Szlam '731 may teach determining if a machine has answered a call based on measuring certain sound parameters, he does not teach or suggest determining if a machine has answered a call while playing a prerecorded greeting prompt and terminating the prerecorded prompt upon detecting a further spoken response. Furthermore, none of the other art cited by the examiner or any combination thereof teaches or suggests such a method.

Accordingly, applicants assert that independent claim 22 is allowable over the combination suggested by the examiner. Therefore, the rejection of claim 22 under 35 U.S.C. 103(a) should be withdrawn.

Claims 23 and 24 were rejected under 35 U.S.C. §103(a) as being unpatentable over Szlam '731 in view of Brown and further in view of Szlam '791. This rejection is respectfully traversed.

Claims 23 and 24 depend from independent claim 22 and, based on the foregoing arguments, are allowable for at least the same reasons as independent claim 22.

Based on the foregoing amendments and remarks, applicant asserts that claims 1-24 are allowable over the cited art of reference. Accordingly, applicant respectfully requests that this application be passed to allowance.

No additional costs are believed to be due in connection with the filing of this Response. However, if any fees are believed to be due, please our Deposit Account No. 50-1133.

Respectfully submitted,

Date: 1/13/03

Scott A. Ouellette
Registration Number 38,573
McDermott, Will & Emery
28 State Street
Boston, MA 02109
Telephone (617) 535-4422
Facsimile (617)535-3800